(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 7 October 2004 (07.10.2004)

PCT

(10) International Publication Number WO 2004/084708 A3

(51) International Patent Classification7:

C12Q 1/06

(21) International Application Number:

PCT/US2004/008566

- (22) International Filing Date: 19 March 2004 (19.03.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/456,613

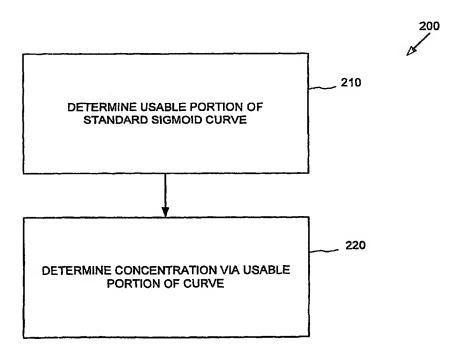
21 March 2003 (21.03.2003)

- (71) Applicant (for all designated States except US): THE GOVERNMENT OF THE UNITED STATES OF AMERICA as represented by THE SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES, CENTERS FOR DISEASE CONTROL AND PREVENTION [US/US]; Technology Transfer Office, 4770 Buford Highway (K79), Atlanta, GA 30341 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): TAYLOR, Thomas, H., Jr. [US/US]; 1926 North Decatur Road, Atlanta, GA 30307 (US).

- (74) Agent: MAURER, Gregory, L.; Klarquist, Sparkman, LLP, One World Trade Center, Suite 1600, 121 SW Salmon Street, Portland, OR 97204 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: FINDING USABLE PORTION OF SIGMOID CURVE



(57) Abstract: A usable portion or threshold of a sigmoid curve (210) is found for determining the concentration or presence of a substrate in a test sample (220).



WO 2004/084708 A3



Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 23 June 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/08566

A. CLASSIFICATION OF SUBJECT MATTER						
IPC(7) : C 12 Q 1/06						
US CL	US CL: 702/23 According to International Patent Classification (IPC) or to both national classification and IPC					
B. FIELDS SEARCHED						
Minimum documentation searched (classification system followed by classification symbols)						
U.S.: Ple	ease See Continuation Sheet	•				
	downwards to the ex-	reant that such documents are included in	the fields searched			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched						
Electronic data	a base consulted during the international search (name of	of data base and, where practicable, search	ch terms used)			
Please See Co	ntinuation Sheet					
C. DOCU	MENTS CONSIDERED TO BE RELEVANT		Delegation No.			
Category *	Citation of document, with indication, where app	propriate, of the relevant passages	Relevant to claim No.			
X,P	US 2003/0157498 A1 (EYRE et al) 21 August 2003 (20053.					
x	US 6,503,720 B2 (WITTWER et al) 07 January 2003 (07.01.2003), See entire document, specifically Figs. 5 and 6, col. 5, lines 1-17, col. 6, lines 1-27, and Examples 1-3,		1-6, 8-11, 13-22, 24-30			
Y	specifically Figs. 5 and 6, coi. 5, lines 1-17, coi. 6, in specifically col. 12, lines 1-32.	ines 1-27, and Examples 1.3,	7, 12, 23			
Y	US 2002/0160012 A1 (KAASTRUP) 31 October 2002	2 (31.10.2002), paragraphs 0008-	7, 12, 23			
	0011.		1-30			
A	US 6,514,770 B1 (SORIN) 04 February 2003 (04.02.2003), See entire document.		1-30			
A	US 2002/0082386 A1 (MANGOLD et al) 27 June 2002 (27.06.2002), See entire document.					
A	US 2002/0034732 A1 (CAPON et al) 21 March 2002 (21.03.2002), See entire document.		1-30			
A	US 6,188,969 B1 (MINOR) 13 Februrary 2001 (13.02.2001), See entire document.		1-30			
A	US 5,948,368 A (HIRAI et al) 07 September 1999 (07.09.1999), See entire document.		1-30			
Further	documents are listed in the continuation of Box C.	See patent family annex.				
* s	pecial categories of cited documents:	"T" later document published after the int date and not in conflict with the appli	cation but cited to understand the			
	t defining the general state of the art which is not considered to be	principle or theory underlying the inv	rention			
	alar relevance plication or patent published on or after the international filing date	"X" document of particular relevance; the considered novel or cannot be considered novel or cannot be considered.	claimed invention cannot be ered to involve an inventive step			
"I" documen	t which may throw doubts on priority claim(s) or which is cited to	when the document is taken alone	elalmed Invention cannot be			
establish specified	the publication date of another citation or other special reason (as	"Y" document of particular relevance; the considered to involve an inventive ste combined with one or more other suc	en when the document is			
"O" documen	t referring to an oral disclosure, use, exhibition or other means	being obvious to a person skilled in t	he art			
"P" documen	it published prior to the international filing date but later than the date claimed	"&" document member of the same paten	t family			
Date of the actual completion of the international search		Date of mailing of the international sea	rch report			
14 March 20	05 (14.03.2005)	00 111/11 2000	<u> </u>			
Name and mailing address of the ISA/US		Authorized officer	ch rece.			
Mail Stop PCT, Attn: ISA/US Commissioner for Patents		Marc Hoff James R.	(III CARREST			
P.O. Box 1450		Telephone No. (703) 305-0976				
	exandria, Virginia 22313-1450 o. (703) 305-3230					

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/08566

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
Category * A	Citation of document, with indication, where appropriate, of the relevant passages US 5,616,504 A (BROWN et al) 01 April 1997 (01.04.1997), See entire document.	1-30		

INTERNATIONAL SEARCH REPORT	International application No. PCT/US04/08566
	_
Continuation of B. FIELDS SEARCHED Item 1:	
702/23 702/19-32 and search terms (sigmoid, concentration, dilution)	
	·
Continuation of B. FIELDS SEARCHED Item 3: US-PGPUB;USPAT;EPO;JPO;DERWENT;IBM_TDB East Text Search Enclosed	

Form PCT/ISA/210 (extra sheet) (January 2004)